JC02 Rec'd PCT/FTC 06 SEP 2005

N THE WARED STATES PATENT AND TRADEMARK OFFICE

In re Application of

MIHAN et al.

SEP 0 6 7005

MAIL STOP:

Serial No.: 10/539,342

Filing Date: June 16, 2005

For: MONOCYLCOPENTADIENYL COMPLEXES

Honorable Comm'r. of Patents PO Box 1450 Alexandria, VA 22313-1450

## Information Disclosure Statement

Sir:

This subject Information Disclosure Statement is submitted in connection with applicants' continuing duty of disclosure under 37 C.F.R. §1.56.

## **LISTING OF RELEVANT DOCUMENTS:**

The relevant documents are listed in the attached Form PTO-1449.

## **REMARKS:**

The documents (A) and (B) are found in the specification on page 1, lines 17-20; documents are (D) and (E) are found in the specification on page 1, lines 21-25; and document (C) is believed to be relevant to the claimed invention.

Document (AA) is listed on page 1, lines 27-29, and on page 22, line 8-10, in the specification. (AB) is equivalent to LU 6173(not published yet); and is also listed in the specification on page 1, line 37-39, page 12, lines 22-24 and page 41, lines 17-19. (AC) is equivalent to LU 6173 (not published yet); documents (AC) and (AD) are found in the specification on page 2, lines 1-3. (AE) is found on page 2, line 16; and (AF) is equivalent to JE 5345 and US 09/308,308; is listed on page 6, lines 4-7; and on page 41, lines 23-24 in the specification.

PCT

IDS

Document (AG) is listed on page 23, lines 22-24; (AH) is equivalent to DT 000002 and US 09/242,124 (abandoned); (AI) is equivalent to DT 000007 and US 6,589,905. Documents (AG), (AH) and (AI) are found in the specification on page 47, lines 21-22. WO 00/31090 (AJ) is equivalent to DT 980126 and US 09/701,658; (AJ) is found on page 24, lines 7-9, page 26, lines 30-32, page 28, line 6 and on page 30, line 6 in the specification.

WO 00/24787 (AK) is listed on page 25, lines 23-27; (AL) is found on page 29, lines 34-35 in the specification. (AM), WO 99/06414 is equivalent to DT 970206 and US 6,417, 302; and is listed on page 30, lines 12-14. WO 01/41920 A1 (AN) is found on page 30, lines 26-28 and on page 41, lines 32-33; document (AO) is equivalent to DE 000028 and US 10/048,688 (not published yet); and is found in the specification on page 41, lines 36-37. WO 98/27124 (AP) seems to be relevant to the claimed invention and (AQ) is found in the specification on page 49, lines 34-35. Document (AR) is listed in category "P", and "X"; and document (AS) is listed in category "X" in the International Search Report.

Kirk-Othmer et al. (BA) is found on page 1, lines 12-15; and (BB) on page 1, lines 32-24 in the specification. Documents (BC), (BD) and (BE) are cited on page 2, lines 9-14, and on page 9, lines 21-25 in the specification. (BF) and (BG) are both found on page 6, lines 4-7; and Haltermann et al. (BH) on page 7, lines 30-34 in the specification. Documents (BI), (BJ), (BN), (BP) and (BQ) seem to be relevant to the claimed invention. Furukawa et al. (BK) is listed on page 16, lines 17-19; (BL) on page 19, lines 27-33; (BM) on page 31, lines 3-5; and (BO) on page 39, lines 5-8 in the specification. A copy of the International Search Report is attached.

Entry is respectfully solicited.

Please charge any shortage in fees due in connection with the filing of this paper, including Extension of Time fees, to Deposit Account No. 14.1437. Please credit any excess fees to such deposit account.

Respectfully submitted,

1 D. Voyhe

NOVAK DRUCE DeLUCA & QUIGG, LLP

Jason D. Voight Reg. No. 42,205

1300 Eye Street, N.W. 400 East Tower Washington, D.C. 20005 (202) 659-0100 JDV/sb

						Sheet:	_1	of:	1
Form PTO-1449					DOCKET NUMBER:	A	PPLICATION N		
I	NFO	DRMATION DISCL	OSURE C	ITATION	8019.101		10/539,34	2	
		IN AN APPLI							
		(use several sie on i	Proessary)						
			_/_						
			2013		APPLICANT:	c	ONFIRMATION	NUMBER	:
		SEP 0 8	2005		MIHAN et al.	G	ROUP ART UN	 IT:	
		A SET OF	<i>\\\\\\\</i>		06/16/2005				
		DOCUMENT NUMBER	U.S	. PATENT DOC	UMENTS				
EXAMINE INITIAL		DOCUMENT NUMBER	DATE		NAME	CLASS	SUBCLAS S		G DATE OPRIATE
	A	US 3,709,853	01/09/73	G. L. Karapinka					OTRIALE
	В	US 4,015,059	03/29/77	Karol					
	C	US 6,417,302	07/09/02	Bohnen					
	D	US 3,242,150	03/22/66	J.S. Scoggin					
	E	US 3,248,179	04/26/66	D.D. Norwood					
								ļ	
								<u> </u>	
			FORE	GN PATENT DO	OCUMENTS		-		
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	UNTRY NAME		SUBCLAS S	TRANSLATION	
								YES	NO
	AA	EP 0 742 046 A2	11/13/96	European	Herrmann et al.				
	AB	DE 197 10 615 A1	09/17/98	Germany	Doehring et al.				
	AC	DE 196 30 580 A1	02/05/98	Germany	Jolly et al.				
	AD	WO 96/13529	05/09/96	PCT	Van Beek et al.				
	AE	WO 01/92346 A2	12/06/01	PCT	Wang et al.				
	AF	WO 98/22486	05/28/98	PCT	Ewen et al.				
	AG	WO 96/00243	01/04/96	PCT	Speca et al.				
	AH	WO 98/40419	09/17/98	PCT	Bingel et al.				
	ΑI	WO 00/05277	02/03/00	PCT	Fischer et al.				
	AJ	WO 00/31090	06/02/00	PCT	Bingel et al.				
	AK_	WO 00/24787	05/04/00	PCT	Wu et al.				
. 4	AL	WO 97/36937	10/09/97	PCT	Devore et al.				
<i>P</i>	AM	WO 99/06414	02/11/99	PCT	Bohnen et al.				
	AN	WO 01/41920 A1	06/14/01	PCT	McDaniel et al.				
	AO	WO 01/09148 A1	02/08/01	PCT	Schopf et al.				
	AP	WO 98/27124	06/25/98	PCT	Bennett et al.			<u></u>	
	AQ	WO 97/04015	02/06/97	PCT	Govoni et al.	ļ			
	AR	WO 03/024982 A1	03/27/03	PCT	Mihan et al.				
	AS	WO 01/12641 A1	02/22/01	PCT	Mihan et al.				
	l					1	1		

		D SEP S				
		OTHER DOCUMENTS 3 700 3				
EXAMINER AUTHOR INITIAL		"Olefin Polymers (High Pressure Polyethylene), Encyclopedia of Chemical Technolog				
BA	Kirk-Othmer	"Olefin Polymers (High Pressure Polyethylene), Encyclopedia of Chemical Technology 1981, Vol. 16, p.402-421				
ВВ	H. Theopold et al.	"Constrained Geometry Chromium Catalysts for Olefin Polymerization"; Department of Chemistry and Biochemistry, Center for Catalytic Science and Technology, University of Delaware; Newark; Delaware 19716; Organometallics 1996, 15, page 5284-5286				
ВС	Jutzi et al.	"Cyclopentadienyl compounds with nitrogen donors in the side-chain"; Journal of Organometallic Chemistry 500 (1995) 175-185; Received: 22 February 1995				
BD	Enders et al.	"8-Quinolylcyclopentadienyl, a Ligand with a Tailored Fit for Chelate Complexes"; Anorganische-Chemisches Institut der Universitaet; VCH Verlagsgesellschaft mbH, D-69451 Weinheim, page 459-463, 1996				
ВЕ	Blais et al.	"Pendant Aminoalkyl-Substituted Monocyclopentadienyltitanium Compounds and Their Polymerization Behavior"; Organometallics 1998, page 3775-3783; Department of Chemistry, University of Massachusetts, Amherst, Massachusetts 01003; Received February 19, 1998.				
BF	Lettau et al.	"Chemie der Heterocyclen"; 1st Edition, VEB Weinheim 1979				
BG	Ewen et al.	"Expanding the Scope of Metallocene Catalysis: Beyond Indenyl and Fluorenyl Derivatives"; Metalorganic catalysts for synthesis and polymerization; Spring Verlag 1999, page 150 - 169				
ВН	Haltermann et al.	"Synthesis and Applications of Chiral Cyclopentadienylmetal Complexes"; Department of Chemistry and Biochemistry, University of Oklahoma; Chem. Rev. 1992, pages 965-994; Received November 18, 1991.				
BI	Strauss et al.	"The Search for Larger and More Weakly Coordinating Anions"; Department of Chemistry, Colorado State University, Colorado 80523; Chem. Rev. 1993, page 93, 927 942; Received: December 03, 1992.				
ВЈ	Freiesleben et al.	Angew. Chem. 75; 1963, page 576				
ВК	Furukawa et al.	"Preparation of Pyridyl Grignard Reagents and Cross Coupling Reactions with Sulfoxides Bearing Azaheterocylces"; Tetrahedron Letters, Volume 28, No. 47; 1987, 5845				
BL	Brandsma et al.	"Preparative Polar Organometallic Chemistry - Volume 2"; Springer Verlag, page				
ВМ	L. Fieser & M. Fieser	Chem. Rev. 2000, Volume 100, No. 4				
BN	L. Fieser & M. Fieser	Lehrbuch der Organischen Chemie, 3 <sup>rd</sup> Edition; Verlag Chemie; Weinheim 1957				
ВО	Wiesenfeldt et al.	"Ansa-Metallocene derivatives"; Journal of Organometallic Chemistry, 369, pages 359-370; Elsevier Sequoia – 1989.				
ВР	Small et al.	"Highly Active Iron and Cobalt Catalysts for the Polymerization of Ethylene"; J. Am. Chem. Soc. 1998, 120, pages 4049-4050; Department of Chemistry, University of North Carolina at Chapel Hill, Chapel Hill, NC 27599-3290; DuPont Central Research and Development Experimental Station; Wilmington, Delaware 19880-0328; Received: January 20, 1998				
BQ	Solan et al.	"Novel olefin polymerization catalysts based on iron and cobalt"; J. Chem. Soc., Commun., pages 849-850; 1998				
MINER		DATE CONSIDERED				

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP §609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

Novak Druce DeLuca & Quigg 1300 Eye Street, N.W. Suite 400 East Washington, DC 20005